

I claim:

1. An apparatus to create musical noise comprising:

5 a shaker having an inner surface defining a central cavity where a plurality of impact particles are contained therein, a central base portion having a lower surface and an upper surface

a frame member having a first base support surface and a second support surface

10 a first spring member having a lower portion and an upper portion where the lower member is supported by the said first base support surface of the said frame member,

15 a drive rod having a lower portion, a central portion and an upper portion, and comprising a stop member positioned below the second support surface of the frame member and the stop member having an upper surface, the drive rod further comprising:

a nut member having a lower surface and an upper surface;

an upper stop member having a lower stop surface

20 a second spring interposed between the upper surface of the nut member and the lower surface of the base portion of the shaker whereas the second spring is adapted to apply a vertical force to the shaker;

25 whereas, the central base portion of the shaker is slidably connected to the said drive rod and is interposed between the

second spring member and the lower stop surface of the upper stop member.

2. The apparatus as recited in claim 1 further comprising:

whereas the driver on is adapted to be displaced vertically
 5 downward thereby causing the shaker to accelerate downwardly causing the impact particles to impact the upper portion of the inner surface of the cavity thereby causing a noise.

3. The apparatus in claim 1 further comprising:

the first spring member is adapted to bias the drive rod vertically
 10 and as the upper surface of the stop member impacts the second base support surface, the shaker is adapted to vertically separate from the nut member so the upper surface of the central base portion of the shaker impacts the lower stop surface of the upper stop member thereby causing the plurality
 15 of impact particles to accelerate vertically, to cause a musical noise.

4. The apparatus in claim 1 further comprising:

a foot pedal attached to the lower portion of the drive rod whereas
 the foot pedal is adapted to display the drive rod vertically
 20 downward and compress the said first spring.

5. The apparatus as recited in claim 1 further comprising:

the said apparatus has a rest position where the upper surface
 central base portion of the shaker is engaged to the lower stop
 surface of the stop member and the second spring is biasing the
 25 shaker thereto.

6. The apparatus as recited in claim 5 further comprising:

whereas when the drive rod is displaced vertically downward the lower stop surface of the stop member accelerates the shaker downwardly whereas the impact particles impact the upper portion of the said inner surface of the shaker thereby causing a musical noise.

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7. The apparatus as recited in claim 6 further comprising:

whereas the shaker is adapted to compress the second spring when the drive rod the accelerates and the impact particles are adapted to impact the lower portion of the inner surface of the shaker.

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8. The apparatus as recited in claim 7 further comprising:

whereas the second spring is adapted to vertically displaced the shaker with respects to the drive rod so the upper surface of the central base portion of the shaker impacts the lower stop surface of the upper stop member.

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9. The apparatus as recited in claim 1 where the second spring is positioned vertically above the first spring and the frame member.

10. The apparatus as recited in claim 1 where the shaker is Taurus shaped

- 20 11. The apparatus as recited in claim 1 where the frame is a cylinder and the central rod is adapted to extend therethrough.

12. The apparatus as recited in claim 11 where the first base support surface of the frame member is an annularly inward extending flange of the frame member.

- 25 13. The apparatus as recited in claim 12 where the second base support surface of the frame member is an annularly inward

extending flange of the frame member located in the upper portion of the frame member.

14. The apparatus as recited in claim 1 where the nut member is adapted to be threaded to the central section of the drive rod.

5 15. The apparatus as recited in claim 1 further comprising, where the lower stop surface of the stop member comprises a cushioning material.

16. A method of creating a musical noise comprising the steps of:

10 retrieving a shaker having an inner surface defining a cavity containing a plurality of impact particles that are loosely positioned therein to create a rattling noise when impacting the said inner surface,

15 slidably positioning the said shaker on a first member between a stop member having an impact surface and a shaker spring having a first and second location where the first location of the shaker spring is operatively engaged to the first member and the second location is adapted to engage the shaker,

20 displacing the first member whereas when the first member is displaced in a first direction and the impact surface of the stop member apply the force to the shaker and thereby causing an acceleration in the first direction,

deaccelerating the first member whereby causing the shaker to compress the shaker spring,

the shaker spring accelerates the shaker in a second direction,

25 the shaker impacts the impact surface of the stop member whereby deaccelerating the shaker traveling in the second direction,

whereas, the impact particles loosely positioned in the said cavity of the shaker are adapted to create a musical noise based upon the accelerations of the shaker in the said first and second direction.

- 5 17. The method as recited in claim 16 where the shaker travels in a substantially reciprocating motion.
18. The method as recited in claim 17 where the mean mass impact particles are positioned above the resting state of the impact particles and hence as the impact particles fall on the lower portion
10 of the inner surface of the shaker, a downward force is exerted thereon and the shaker spring is compressed.
19. The method as recited in claim 18 where the harmonic action is a campaign oscillating action.
20. The method as recited in claim 19 where the first member is
15 displaced a second time to supply a force upon the shaker to continue the oscillations of the shaker.
21. The method as recited in claim 16 where the first and second directions are substantially vertically downwardly and substantially vertically upwardly respectively.
- 20 22. The method as recited in claim 16 further comprising a base spring having a first and second location, where the first location is operatively engaged to the said first member and the second location is operatively engaged to a frame member whereas when the first member travels in the said first direction the base spring
25 compresses and the base spring helps accelerate the first member in the said second direction.

23. The method as recited in 22 where the frame member is stationary with respects to the substantially reciprocating first member.

24. The method as recited in claim 16 where the first and second directions are diametrically opposed to one another.

5 25. The method as recited in claim 16 further comprising the steps of supplying a foot pedal connected to the said first member whereas depressing the foot pedal causes the first member to be displaced in the said first direction.

26. An apparatus to create musical noise comprising:

10 a first member having a longitudinal axis where the first member is adapted to travel in a substantially reciprocating motion along the said longitudinal axis where the range of travel along the said longitudinal axis is defined as a first range, the first member comprises:

15 a first stop location having a first portion of a shaker spring operatively engaged thereto where the shaker spring has a second portion located on the opposite region with respects to the first portion,
a second stop location located on the first member a
20 distance from the first stop location within the said first range,

a shaker having an inner surface defining a cavity that is adapted to hold a plurality of impact particles,

25 whereas the shaker is adapted to be moved in the direction of the longitudinal axis and at least a portion of the shaker is adapted to move between the second stop location and a second portion of the said shaker spring.

27. The apparatus as recited in claim 26 where the second stop location has an impact surface that is adapted to engage at least a portion of the shaker.
- 5 28. The apparatus as recited in claim 27 further comprising where the shaker has a rest position where at least a portion of the shaker is in contact with the said impact surface of the second stop location and the said shaker spring biases the shaker thereto.
- 10 29. The apparatus as recited in claim 26 further comprising where the shaker has a rest position where at least a portion of the shaker is in located at the said the second stop location and the said shaker spring biases the shaker thereto.
30. The apparatus as recited in claim 27 where the longitudinal axis has a first direction and a second direction.
- 15 31. The apparatus as recited in claim 30 where the shaker is adapted to move in the first direction by a force caused by the impact surface at the second stop location caused by an acceleration of the first member in the first direction.
32. The apparatus as recited in claim 29 where the longitudinal axis has a first direction and a second direction.
- 20 33. The apparatus as recited in claim 32 where the shaker is adapted to move in the first direction and compress the said shaker spring by a deceleration of the plurality of impact particles as they impact the lower portion of the interior surface of the shaker thereby imparting a force thereon.
- 25 34. The apparatus as recited in claim 29 where the shaker is adapted to when accelerate a downwardly the particulate matter contained

therein is adapted to impact the upper portion of the inner surface of the said chamber of the shaker.

- 5 35. The apparatus as recited in claim 34 where the shaker is adapted to be accelerated in the said first direction by the action of the plurality of the impact particles impacting the lower portion of the inner surface of the cavity.
36. The apparatus as recited in claim 35 where the shaker is adapted to oscillates for a period of time based upon the accelerations of the plurality of impact particles.
- 10 37. The apparatus as recited in claim 26 where the longitudinal axis has a first direction and a second direction where the impact surface of the second stop location is adapted to bias the shaker toward the said first direction and the second portion of the said shaker spring is adapted to bias the said shaker toward the second direction.
- 15 38. The apparatus as recited in claim 37 further comprising a frame member having a first portion of a base spring operatively engaged thereto and a second portion of the base spring is operatively engaged to the said first member and biases the said first member toward the said second direction.
- 20 39. The apparatus as recited in claim 38 further comprising a foot pedal adapted to displacing the said first member in the said first direction.
- 25 40. The apparatus in claim 38 further comprising where the first stop is adapted to engage an impact surface of the frame member and is adapted to cause a deaccelerating of the first member when the first member travels in the said first direction.

41. The apparatus as recited in 40 where the frame member further comprises a foot pedal connected thereto that is adapted to displacing the first member in the first direction.
- 5 42. The apparatus as recited in claim 41 whereas the first direction is substantially vertically downward.
43. The apparatus as recited in claim 42 here the second direction a substantially vertically upward.